

JAN 24 2007

Application No.: 10/623,037

Docket No.: TOW-033

REMARKS

Applicants amend claim 4. No new matter is added. Upon entry of this amendment, claims 1-5 are presented for examination, of which claim 1 is independent. Applicants respectfully submit that the pending claims define over the art of record.

Claim Rejections Under 35 U.S.C. §112

Claim 4 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants amend claim 4 to address the Examiner's concern. Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 4 under 35 U.S.C. § 112.

Claim Rejections Under 35 U.S.C. §102

Claims 1-2 are rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,525,436 to Savinell et al. (hereafter "Savinell"). Claims 1-5 are rejected under 35 U.S.C. §102(e) as being anticipated by United States Patent Application Publication No. 2002/0094466 to Kerres et al. (hereafter "Kerres"). Applicants respectfully submit that the neither the Savinell reference nor the Kerres reference disclose the limitation of the acid group possessing polymer and the basic group possessing polymer are compatibilized with each other, as recited in claim 1.

The Savinell Reference

The Savinell reference teaches a solid polymer electrolyte formed of basic groups that can form complexes with stable acids, or polymers containing acidic groups which can be used to form films suitable for use as a solid polymer electrolyte membrane in fuel cells. See Col.2, lines 55-59. Of particular interest among polymer examples, is polybenzimidazole, doped with a strong acid such as phosphoric acid. See Col.2, lines 63-64. However, water produced by the operation of the fuel cell is absorbed by the phosphoric acid. Therefore the concentration of phosphoric acid is lowered, and the amount of phosphoric acid is increased. When the amount of phosphoric acid exceeds an amount which the base material of the composite electrolyte is

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capable of retaining, phosphoric acid begins to exude out from the composite electrolyte. See Present Application Publication, [0009]. The Savinell reference does not teach the acidic group possessing polymer and the basic polymer *being compatibilized with each other*, as required by claim 1. When the acidic group-possessing polymer and the basic polymer are compatibilized with each other, the acidic group-possessing polymer is hardly eluted into the liquid.

Applicants respectfully submit that the Savinell reference fails to disclose each and every element and limitation of claim 1. Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 1 under 35 U.S.C. § 102.

Applicants note that the dependent claims also recite patentable subject matter. As such, for this and the reasons set forth above, Applicants respectfully submit that the dependent claim 2 also defines over the art of record.

The Kerres Reference

The Kerres reference teaches a composite membrane formed when an organic component is incorporated into the cavities of a cross linking component of the membrane, given that the base is provided on a polymer backbone. See [0017]. However when an acidic group-possessing polymer has a large mole number of acidic group contained per gram, the gelation is caused by the acid-base interaction in the organic solvent. Therefore the acidic group-possessing polymer and the basic polymer are not blended sufficiently. See Present Application Publication, [0019]. The Kerres reference does not teach the acidic group possessing polymer and the basic polymer *being compatibilized with each other*, as required by claim 1. When the acidic group-possessing polymer and the basic polymer are compatibilized with each other, the acidic group-possessing polymer and the basic polymer are mixed without causing any phase separation.

Applicants respectfully submit that the Kerres reference fails to disclose each and every element and limitation of claim 1. Applicants respectfully request that the Examiner reconsider and withdraw the rejection of claim 1 under 35 U.S.C. § 102.

Applicants note that the dependent claims also recite patentable subject matter. As such, for this and the reasons set forth above, Applicants respectfully submit that the dependent claims 2-5 also define over the art of record.

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CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicants believe no fee is due with this statement. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. TOW-033 from which the undersigned is authorized to draw.

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Respectfully submitted,

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